

REMARKS

Several editorial corrections have been made to the specification. Claims 1 - 5, 11, 14 - 18, 26, 28 - 32, 40, 42 - 46, 51 - 53, and 58 - 60 have been amended. Claims 65 - 69 have been added. No new matter has been introduced with these corrections, amendments, or added claims, which are supported in the specification as originally filed. Claims 1 - 69 are now in the application.

Independent Claims 1 and 58 have been amended to specify that the computer program product may be embodied on "one or more" computer-readable media. This is discussed in the specification on (for example) p. 17, lines 9 - 10, referring to "server-specific and client-specific parts".

Added Claims 65 - 66 correspond to the third aspect of the fourth embodiment, which is described on p. 48, line 3 - p. 49, line 7. Added Claims 67 - 69 correspond to the first and second aspects of the fourth embodiment. See, for example, the text on p. 46, lines 14 - 17 and p. 47, lines 12 - 15.

Thus, it can be seen that no new matter has been introduced.

I. Rejection Under 35 U.S.C. §112, second paragraph

Paragraph 3 of the Office Action dated December 3, 2003 (hereinafter, "the Office Action") states that Claims 1, 14, 28, 42, 51, and 58 are rejected under 35 U.S.C. §112, second

paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as their invention. In particular, use of the terms "low-overhead connection", "existing message type", "piggy-backing", and "computing environment" are considered problematic. Paragraph 3 also states that Claims 2 - 13, 15 - 27, 29 - 41, 43 - 50, 52 - 57, and 59 - 64 are rejected on the same basis.

Applicants' disclosed invention is considered low-overhead in that it exchanges security data using a minimal number of message flows. (See, for example, p. 20, lines 1 - 7 of Applicants' specification, where this is discussed in terms of one embodiment of Applicants' invention. See also p. 45, lines 15 - 18, where the flows used by an embodiment claimed in this application are initially presented.) In the interest of progressing quickly to issuance, this "low-overhead" phrase has been deleted from the claims with the amendments made herein.

Preferred embodiments of Applicants' disclosed invention use already-existing message types, such as HTTP GET requests and responses, as noted in Applicants' specification. See, for example, the third sentence of the Abstract. The text of paragraph 3 of the Office Action states that "the instant any message is created[,] it becomes an 'existing' message type". Applicants respectfully submit that the instant any message is created, it becomes "an existing message", where this existing message may be a message of (or adhering to) an existing message type. (That is, a message does not "become" a message type.) However, in the interest of progressing quickly to issuance, Applicants accept the Examiner's suggestion and the term "existing message type" is amended herein to "pre-existing message type".

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The text of paragraph 3 of the Office Action also states that it is not clear what is meant by "piggy-backing" information. This is discussed at many places in Applicants' specification. See, for example, p. 20, lines 3 - 6, where (by way of example) it is stated that the initial HTTP GET request can be used to transmit parameters securely (where this HTTP GET request also transmits the client's request for a particular Web page); when the server sends its response (as an HTTP GET response, in this case), that response can contain securely-transmitted content. In this example, the parameters (and potentially other security information) are "piggy-backed" onto the GET request message, and information that can be used when decrypting the secure content is piggy-backed onto the GET response message. The text on page 27, lines 13 - 16 discusses two ways in which the piggy-backing of the parameters may occur. In one approach, the parameters may be transmitted as separate request headers of the request message. In another approach, the parameters may be appended to the URL in the request message. Applicants respectfully submit that the claims, as presented herein, are not unclear regarding what Applicants intend.

Paragraph 3 of the Office Action also states that it is not clear what is meant by "computing environment". In the interest of progressing quickly to issuance, Applicants have removed this term from their claim language.

In view of the above, the Examiner is respectfully requested to withdraw this rejection.

II. Requirement for Information Under 37 C.F.R. §1.105

Paragraph 4 of the Office Action states that Applicants and the Assignee are required

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under 37 C.F.R. §1.105 to state whether any search of prior art was performed, and to provide the citation for each prior art collection search as well as citations of each piece of art "considered material to demonstrating the knowledge of a person having ordinary skill in the art to the disclosed invention of coupling or 'piggy-backing' ... client-server HTTP messages with key exchange and the exchange of security parameters" and each publication that Applicants relied upon to draft the claimed subject matter.

A search was conducted. The field of search included 380/21, 25, and 49. The databases searched are stated as WPAT, DOSS, TDBS, JAPIO, INSM, APS, USPM, and INTERNET. None of the patents or publications uncovered in that search were deemed material to the patentability of the various embodiments of Applicants' invention, and therefore an IDS was not submitted.

The cited patents from the search report are as follows:

- U. S. 5,202,922, "Data communication system", CL/SUB 380/45.
- U. S. 5,313,521, "Key distribution protocol for file transfer in the local area network", CL/SUB 380/21.
- U. S. 5,557,678, "System and method for centralized session key distribution, privacy enhanced messaging and information distribution using a split private key public cryptosystem", CL/SUB 380/21.
- U. S. 5,781,633, "Capability security for transparent distributed object systems", CL/SUB 380/25.

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- U. S. 5,825,890, "Secure socket layer application program apparatus and method", CL/SUB 380/49.
- U. S. 5,850,442, "Secure world wide electronic commerce over an open network", CL/SUB 380/21.
- FR 2753027, "Security device for data exchange network", CL/SUB HO4L009/30.

The cited publications from the search report are as follows:

- IBM Technical Disclosure - "Extending Secure Sockets Layer for Key Recovery", Vol. 41, No. 01, January, 1998.
- IBM Technical Disclosure - "Efficient Methods for Two Party Entity Authentication and Key Exchange in a High Speed Environment", Vol. 38, No. 3, March, 1995.
- IBM Technical Disclosure - "Security for Routing Based on Link State Algorithms", Vol. 39, No. 3, March, 1996.

Neither Applicants nor Applicants' attorney relied on any of the afore-mentioned patents or publications when drafting the application. Accordingly, Applicants believe that the requirements specified in the Office Action have been met by providing the citations, above. Copies of the three cited publications are submitted herewith, for convenience of the Examiner. If other information is required, the Examiner is requested to notify Applicants' attorney.

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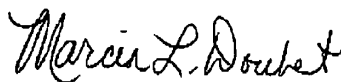
In drafting the application, Applicants and Applicants' attorney considered information in the commonly-assigned U. S. Patent application 09/415,646, which is cited in this specification (and which is referred to therein as "the referenced patent application"). The pertinent information from that reference is discussed in the application as originally filed.

In addition, Applicants and Applicants' attorney relied on information describing the then-current description of the HTTP and WSP GET, POST, and REDIRECT messages, as well as the then-current description of the www-Authenticate header. Those references (which were not listed on the search report) were publicly available, and pertinent pages were obtained from the Internet; the citations of the actual references which were used are not presently known. However, it is believed that this information remains publicly available from the Internet.

III. Conclusion

Applicants have addressed the rejections in the Office Action, and therefore the claims as presented herein are deemed patentable. Applicants respectfully request reconsideration of the pending rejected claims, withdrawal of all presently outstanding rejections, and allowance of all claims at an early date.

Respectfully submitted,



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Attachments: printed publications (3)

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